2nd IQuOD Workshop Agenda

June 4th to 6th, 2014.

Hosted by NOAA, Silver Spring/Washington DC, USA.

The organisers of the 2nd IQuOD (International Quality controlled Ocean Database) Workshop welcome you. The general aims of the workshop are listed below, followed by the Agenda in detail.

The topics of the meeting include:

1. Evaluation of auto QC benchmarking tests/results. (potential scientific/technical papers resulting from this activity)
2. Development of goals for the subgroup on manual QC (potential scientific/technical papers resulting from this activity).
    a. Quantification of the potential cost of the manual QC step.
    b. Identification and recruitment of manual QC experts.
3. Attaching uncertainties to observations
    a. Investigate forming a sub-group on intelligent metadata, data formats, flagging and uncertainty estimates.
4. Discuss and refine the importance of the project to data assimilation/climate forecasting and model evaluation (metrics) efforts/
5. Review funding opportunities (SCOR, DOE, H2020, etc).

Meeting outcomes:

1. Review the first workshop goals and revise as required.
2. Review the structure of the project. Steering team, working groups, expert groups etc.
3. Review action items from the last meeting.
4. Discuss outline for scientific & implementation plan /sharing of writing tasks.
5. Set goals and action items for the next year.
6. Workshop report
7. Technical papers as decided on at the workshop.

Wednesday June 4

8.00 – 8.20	Registration and coffee		20 mins
8.20 – 8.30	**Welcome and local logistics**	NOAA representative (Tim Boyer or Gustavo Goni)	10 mins
8.30 – 8.45	**Introductions** Round the table getting people to say who they are, where they are from and main area of expertise	All	15 mins
Session 1: Setting the scene – current project structure, workplan and progress made in the last year.			
Session Chair: Viktor Gouretski. Notetaker: Simon Good			
8.45 – 9.05	**Project aims and structure** Recap of aims of the project, what happened at the first workshop and overview of the current project structure, action items from last meeting, outcomes from Ocean ScienceTown Hall. Corporate Image.	Catia Domingues, Bec Cowley	20 mins
9.15 – 9.35	**Recap on goals for Auto QC, Manual QC, Data aggregation and Data assembly groups** – recap goals from first workshop.	Bec Cowley, Ann Thresher, Catia Domingues, Tim Boyer	20 mins
9.35 – 9.50	**The scientific implementation plan and plans for CLIVAR endorsement** Discuss the scientific implementation plan outline, the importance of CLIVAR endorsement etc.	Matt Palmer	15 mins
9.50 – 10.10	**Discussion** - after a year to reflect, did we do anything wrong, is anything missing from the current project structure, what has gone well etc.	All	20 mins
10.10 – 10.30	Tea, coffee, biscuits		20 mins
Session 2: Auto QC group benchmarking results			
Session Chair: Catia Domingues. Notetaker: Matt Palmer			
10.30 – 10.40	**Auto QC group** – brief description of current work plan and the progress over the last year.	Bec Cowley	10 mins
10.40 – 10.50	**Description of AOML tests**	Francis Bringas	10 mins

10.50 – 11.00	**Description of NODC tests**	Tim Boyer	10 mins
11.00 – 11.10	**Description of CSIRO tests**	Bec Cowley	10 mins
11.10 – 11.20	**Description of Met Office tests**	Simon Good	10 mins
11.20 – 11.30	**Description of ICDC tests**	Viktor Gouretski	10 mins
11.30 – 11.50	**Auto QC results** The auto QC benchmarking tests/results. Can we quantify the cost for the Manual QC step? Are there any other groups that should be involved?	Ann Thresher, Viktor Gouretski	20 mins
11.50 – 12.30	**Discussion of auto QC results** Discussion of auto QC results / should there be publications / where to go from here. Can we converge and agree on autoQC tests?	All	40 mins
12.30 – 13.30	Lunch (self-funded)		60 mins
Session 3: Invited talks from data users and producers			
Session Chair: Tim Boyer. Notetaker: Alison Macdonald			
13.30 – 13.50	**Invited user talk 1**: Operational SI Climate Forecasting Data Requirements: Distribution, Types, QC	David Behringer	20 mins inc. questions
13.50 – 14.10	**Invited talk 2**: Current status of the Japanese XBT data reconstruction and related ocean-atmosphere analysis work.	Masayoshi Ishii	20 mins inc. questions
14.10 – 14.30	**Invited user talk 3**: The importance of QC'd data for models/reananlysis.	Jim Carton	20 mins inc. questions
14.30 – 14.50	**Invited talk 4**: The QC of seal tag data.	Fabien Roquet	20 mins inc. questions
14.50 – 15.20	Tea, coffee, biscuits		30 mins
15.20 – 15.40	**Invited talk 5**: QC methods at CORIOLIS/IFREMER	Christine Coatanoan	20 mins inc. questions
15.40 – 16.00	**Invited user talk 6**: How IQuOD is relevant for model performance metrics?	Paul Durack for Peter Glecker	20 mins inc. questions
16.00 – 16.30	**Catch up time if needed**		30 mins

Session 4: User requirements and interactions			
Session Chair: Ann Thresher. Notetaker: Bec Cowley			
16.30 – 16.50	**User requirements gathering** – experience from the ESA Climate Change Initiative project on SST	Simon Good	20 mins inc. questions
16.50 – 17.30	**Discussion on user requirements** What do the user requirements tell us about IQUOD? Do we need to do more user requirement gathering? Should we focus in on satisfying particular user group(s)?	All	40 mins
18.30 onwards	Dinner location to be advised (self-funded)		

Thursday June 5

8.00 – 8.20	Tea, coffee		20 mins
Session 5: Data types and flows			
Session Chair: Bec Cowley. Notetaker: Catia Domingues			
8.20 – 8.40	**Data types** Review the types of data (different instruments, date ranges etc.) in the historical record and recap decisions made at last workshop about which we are going to QC.	Viktor Gouretski	20 mins
8.40 – 8.55	**Discussion on data types** Discussion to reaffirm/change the types of data we are handling, discuss the implications of including / not including particular types.	All	15 mins
8.55 – 9.15	**Data flows** Description of how the end to end processing chain will/might work for IQuOD (e.g. original data into WOD -> Auto QC locally at NODC or somewhere else? -> WOD -> Manual QC group -> back to WOD, will there be data releases held elsewhere and if so how do we combine IQuOD data with other data e.g. Argo for those who want all data?	Tim Boyer	20 mins
9.15 – 9.30	**Discussion on data flows**	All	15 mins
9.30 – 9.50	**ISO endorsed flagging system.**	Hernan Garcia	20 mins
9.50 – 10.10	**File content and data flagging** What do we need in the files to make the data useful and easy to use?	Ann Thresher	20 mins
10.10 – 10.35	**Discussion on file content and data flagging**	All	25 mins
10.35 – 10.55	Tea, coffee, biscuits		20 mins
Session 6: Specific areas of work 1			
Session Chair: Matt Palmer. Notetaker: Ann Thresher			
10.55 – 11.15	**Assigning uncertainties to individual observations –** experience from building HadIOD	Chris Atkinson, Met Office (presented by Simon Good)	20 mins
11.15 – 11.35	**Discussion on assigning uncertainties** – how to go about assigning uncertainties	All	20 mins

11.35 – 11.50	**Data aggregation** – getting data into WOD that aren't already there	Tim Boyer	15 mins
11.50 – 12.10	**Discussion about data aggregation**	All	20 mins
12.10 – 13.10	Lunch (self-funded)		60 mins
Session 7: Specific areas of work 2			
Session Chair: Gustavo Goni. Notetaker: Ann Thresher			
13.10 – 13.25	**Intelligent metadata, metadata recovery and bias adjustment –** How we might approach this and how it would relate to XBT bias adjustment work. Can we quantify the cost of metadata recovery efforts? What techniques can we use in place of missing metadata?	Simon Good	15 mins
13.25 – 13.45	**Discussion about intelligent metadata**	All	20 mins
13.45 – 14.15	**Manual QC** – existing methods / software / need for training to use them etc. Can we quantify the cost of ManualQC? How do we tackle the problem – regional experts, instrument type, time period? Crowd sourcing?	Ann Thresher, [Matt Palmer (crowd sourcing)]	30 mins
14.15 – 15.15	**Discussion on how to approach the manual QC**	All	60 mins
15.15 – 15.45	Coffee break, workshop photo		30 mins
Session 8: Refining the project structure and plan 1			
Session Chair: Simon Good. Notetaker: TBC			
15.45 – 16.00	**Reminder of project structure**	Catia Domingues	5 mins
16.00 – 16.20	**Discussion on project structure** – how should project structure be changed – what working groups are needed?	All	20 mins
16.20 – 16.50	**Breakout sessions** – one for each working group. People (randomly?) selected to go to one. Each to answer the questions: 1) What should the IQuOD group achieve in the next year (or beyond) and by when? 2) What input is needed from other groups and by when?	All	30 mins
16.50 – 17.50	**Report back from each working group and general discussion**;	All	60 mins

	someone to take notes and synthesise into slides showing plans for next year		
18.30	Dinner at location to be confirmed (self funded)		

Friday June 6

8.00 – 8.20	Tea, coffee		20 mins
Session 9: Refining the project structure and plan 1			
Session Chair: Steve Diggs. Notetaker: Bec Cowley			
8.20 – 8.50	**Presentation of the revised project plan and impact on the scientific implementation plan**	Catia Domingues	30 mins
8.50 – 9.30	**Further discussion** – confirm what key outputs (papers / technical documents / software / data) we want to achieve in the next year.	All	40 mins
9.30 – 9.50	**Organising people into working groups** e.g. re-confirming the make up of existing working groups, volunteers for new working groups including volunteers to help with writing/revising the scientific implementation plan.	All	20 mins
9.50 – 10.20	**Funding** – what difficulties are there with people to have funding to work on IQuOD, what opportunities are there to get funding? If suitable opportunities are available, get volunteers to write the proposals. How should we structure the funding for IQUOD (eg – look at GO-Ship funding). IQuOD has global coordination with regional funding.	Catia Domingues to lead discussion	30 mins
10.20 – 10.40	Tea, coffee		20 mins
Session 10: Communication plans and close			
Session Chair: Catia Domingues Bec Cowley – to lead discussions. ***Notetaker: TBC***			
10.40 – 11.10	**Discussion on internal communication plans** (how should we communicate within the project, introduction to website plans)	Bec Cowley – website intro.	30 mins
11.10 – 11.40	**Discussion on external communication** – Communication	All	30 mins

	and outreach over the next year, including communication with data generators?		
11.40 – 12.00	**Any other business** that has arisen during the meeting		20 mins
12.00 – 12.10	**Agree date/location of next meeting**		10 mins
12.10 – 12.30	**Agree list of actions from the meeting** and confirm next steps		20 mins
12.30 – 12.40	**Final words and close**.		10 mins

Participant list.

Name	Affiliation
Catia Domingues	ACE-CRC
Bec Cowley	CSIRO Marine and Atmospheric Research
Ann Thresher	CSIRO Marine and Atmospheric Research
Tim Boyer	NODC/NOAA
Gustavo Goni	AOML
Charles Sun	NODC/NOAA
Francis Bringas	AOML
Alison Macdonald	Woods Hole Oceanographic Institution
Matt Palmer	Met Office Hadley Centre
Simon Good	Met Office Hadley Centre
Viktor Gouretski	University of Hamburg
Hannah Dean	Interagency Ocean Observation Committee, Consortium for Ocean Leadership
Igor Belkin	University of Rhode Island
Christine Coatanoan	IFREMER
Jim Carton	Atmospheric and Oceanic Science Center/University of Maryland
Syd Levitus	Atmospheric and Oceanic Science Center/University of Maryland
Ariel Hernan Troisi	Servicio de Hidrografia
Molly Baringer	AOML
Masayoshi Ishii	Meteorological Research Institute
David Behringer	NOAA/NCEP/Environmental Modeling Center
Toru Suzuki	Marine Information Research Center
Melissa Zweng	NODC/NOAA
Igor Smolyar	NODC/NOAA
Olga Baranova	NODC/NOAA
Krisa Arzayus	NODC/NOAA
Ricardo Locarnini	NODC/NOAA
Paul Durack	Lawrence Livermore National Laboratory, US
Alex Kosyr	CDIAC
Steve Diggs	UCSD
Janet Sprintall	UCSD
John Antonov	UCAR Project Scientist at NODC
Chris Paver	National Oceanographic Data Center
David Legler	Climate Program Office-NOAA, US
Steve Piotrowicz	Climate Program Office-NOAA, US
Hernan Garcia	NOAA/NESDIS/NODC
Dan Seidov	NOAA NODC/MDSD OC1
Alexey Mishonov	ESSIC/CICS-MD, University of Maryland & Ocean Climate Lab/NODC/NESDIS/NOAA Affiliate

Candyce Clark	CPO
Joel Levy	CPO
Marlos Goes	AOML